

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.
SECTOR 4 — CHART INFORMATION

SECTOR 4

WEST COAST OF MEXICO—GULF OF CALIFORNIA

Plan.—This sector describes the W coast of Mexico and adjacent islands on the E side of the Gulf of California, from the Rio Colorado to Cabo Corrientes. The descriptive sequence is SE.

Rio Colorado to Guaymas

4.1 Punta Bajo (Punta Baja) (31°33'N., 114°19'W.), the E entrance point of the Rio Colorado, is low, sandy, and fronted by shoal ground extending up to 0.5 mile offshore. A bare sand hill, 91m high, rises immediately behind this point.

Colina de la Direccion (31°47'N., 114°30'W.) rises behind a slight projection of the beach, 9 miles NW of Punta Bajo. This hill is 170m high and may be easily identified by a growth of bushes at its foot.

Bahia de Adair (31°29'N., 113°50'W.), a wide and deep indentation, is filled with dangerous shifting shoals and should not be entered even by the smallest coaster. A lagoon, fronted by drying sand spits, opens into the NW part and a low plain stretches far into the interior from the shore.

A light is shown from Punta Borrascosa, the NW entrance point of Bahia de Adair. Cerro Pinacate, the N most summit of a mountain range standing in the interior, is 1,291m high and rises 25 miles NE of the central part of the bay.

Punta Choya, the E entrance point of the bay, is bold and rocky. Cerro Plano (Flat Hill), a conspicuous dark and isolated hill, is 130m high and stands 4.5 miles NNE of the point.

Bahia de Punta Penasco (31°18'N., 113°37'W.) is entered between Roca del Toro (Punta Choya) and Punta Penasco, 5.5 miles ESE. It is small, open, fringed by foul ground extending up to 0.5 mile offshore, and backed by a sandy beach.

4.2 Puerto Penasco (31°19'N., 113°35'W.) (World Port Index No. 15860), a small loading port with limited facilities, lies at the head of the bay. A small finger pier, with a depth of 4.9m alongside, extends from the shore abreast the town and is served by a spur of the Southern Pacific Railway. A lighted range, bearing 116°, is shown from two pyramidal metal towers standing at the port.

Anchorage can be taken, sheltered from NW winds, in depths of 9 to 11m on a line joining the entrance points of the bay.

Bahia de San Jorge (31°08'N., 113°08'W.) lies between Punta Penasco and a low, sandy peninsula, 27 miles SE. Behind the low and sandy shores of the bay are plains that extend inland to the foot of the mountains. A dangerous bank, with depths of 0.9 to 1.8m, extends 3 miles W from the peninsula and the passage leading between its outer edge and Isla San Jorge has depths of 7.3 to 12.8m. Shoal ground extends 1 to 3 miles seaward near the head of the bay. At HW, small vessels may enter a lagoon, which lies 6 miles E of Punta Penasco.

4.3 Isla San Jorge (31°01'N., 113°16'W.), a barren and rocky islet, lies 7 miles WSW of the S entrance point of Bahia de San Jorge and is marked by a light. Foul ground extends up to 1 mile NW from this islet. Anchorage can be taken in a depth of 6m to the N of the islet.

The coast between Bahia de San Jorge and Cabo Tepoca, 49 miles SSE, is low, sandy, and backed by sand hills. Depths of less than 5.5m lie between 0.5 and 1 mile from the shore.

Rio de la Concepcion (30°30'N., 113°00'W.) is a river that is noticeable by a gap in the sand hills, through which it breaks in the wet season. A light is shown at the river mouth, which is fronted by an extensive bank. The N extremity of the coastal range of mountains in this vicinity can be viewed from close S of the river.

The coast between the mouth of the Rio de la Concepcion and Cabo Tepoca, 17 miles SSE, consists of low sand dunes.

Cabo Tepoca (30°16'N., 125°53'W.), 91m high and reddish in color, is backed by a group of hills. This cape is fringed by sunken rocks and marked by a light. Pico Tienda de Campana, 746m high, and Monte Plano, 480m high, rise 9 miles ESE and 6 miles ENE, respectively, of the cape. These hills are prominent and very similar in appearance when viewed from the S, both being square-shouldered with a sharp peak in the center.

Bahia Tepoca, lying close E of Cabo Tepoca, provides good anchorage, sheltered from NW winds, in a depth of 9m about 0.5 mile offshore.

Monte Obscuro, another prominent landmark, rises 9 miles NNW of the cape. This mountain first appears as a dark, red, and flat-topped island, then later as a bluff rising to the W.

Cabo Lobos (29°54'N., 112°45'W.), 214m high, is located 23 miles SSE of Cabo Tepoca and marked by a light. This rocky headland is backed by a group of hills and fringed by sunken rocks. Cerro Lobos, 361m high, stands close to the coast 3 miles N of this cape and a prominent peak, 501m high, stands 6 miles N of it.

Anchorage, sheltered from NW winds, can be taken in depths of 14 to 15m about 0.5 mile offshore within the bight lying E of Cabo Lobos.

4.4 Puerto Libertad (29°54'N., 112°40'W.) (World Port Index No. 15976), fronting a power station, consists of a pier, formed by dolphins. It is connected to the shore by a catwalk, 900m long, and provides a berth which can accommodate tankers of up to 60,000 dwt and 12.8m draft.

Pilots are available and board at Guaymas. It is reported that a racon is situated at the pier.

It is reported that good anchorage can be taken in a depth of 50m about 0.8 mile SW or NW of the pier.

Cabo Tepopa (29°23'N., 112°25'W.), located 36 miles SSE of Cabo Lobos, is a bold, rocky headland backed by a group of hills. Cerro Tepopa, the tallest hill is 566m high and rises close

inland. The intervening coast between the two points consists of sandy beaches, with occasional rocky bluffs, which are backed by a coastal range. A light is shown from the mouth of the Rio San Ignacio, 9 miles N of Cabo Tepopa.

Punta Sargento (29°38'N., 112°46'W.), located 7 miles SE of Cabo Tepopa, is formed by a barren, rocky hill. It is connected to the mainland, on the N side, by a narrow isthmus which covers at HWS.

Anchorage can be taken in a depth of 13m about 0.5 mile offshore within the small bight lying close W of the point. The small bay lying close E of the point is shoal and should be avoided.

4.5 Isla Patos (29°16'N., 112°27'W.), small and steep-to, rises to a height of 84m on its NW side. This island is marked by a light and has been whitened by the deposits of sea birds. During NW winds, anchorage can be taken in a depth of 9m, sand, off the S side of the island. Shoals front a low point located at the SW side of the island and vessels should not approach within 0.3 mile of the coast in this vicinity.

Isla Tiburon (29°00'N., 112°21'W.), the largest island in the Gulf of California, is bold and rugged with peaks 328 to 1,218m high. The summit of the island stands in the central part. Canal del Infiernillo, which lies between the E side of the island and the mainland, is obstructed by numerous shoals in its N part and should be avoided, even by very small vessels.

The E coast of the island is generally low and sandy up to within 5.5 miles of its SE extremity. The coast extending S of this point is backed by steep, rocky bluffs.

The SE extremity consists of a high headland located at the outer end of a narrow peninsula on which there are two hills separated by a strip of low land. Anchorage can be taken by vessels with local knowledge in a depth of 9m within the bight lying N of the peninsula.

A sandy beach extends 3 miles WSW and fringes the shore between the SE extremity of the island and Punta Monumento, the S extremity.

Punta Risco Colorada, a sharp and rocky point of reddish-color, is located 2.5 miles WNW of Punta Monumento. Good anchorage can be taken in a depth of 9m about 0.3 mile offshore within the bay lying between the two points.

Punta Willard (28°53'N., 112°35'W.), the W extremity of the island, is 105m high and marked by a light. White Rock (La Predra Blanca), 9m high, lies close offshore, 3.8 miles ESE of this point.

The coast extending N between Punta Willard and the NW extremity of the island is generally steep and is backed by mountains which rise abruptly from it.

Bahia Agua Dulce (29°12'N., 112°24'W.), entered close E of the NW extremity of the island, provides anchorage in depths of 9 to 11m and about 0.7 mile offshore.

4.6 Isla Turners, a small and barren island, lies 1.2 miles SE of Punta Monumento. It is marked by a light and is 167m high. Roca de la Foca, 46m high, lies about midway between this island and the point. The passage leading N of the rock has a depth of 9m, but should not be attempted without local knowledge.

Isla San Esteban (28°42'N., 112°35'W.), 540m high in the center, lies 9 miles S of Punta Willard. It is barren, rocky, and

fronted by shoals and rocks, which extend up to 0.8 mile seaward in places. The channels leading E and W of this island are deep and clear of dangers.

Isla San Pedro Martir (28°22'N., 112°20'W.), 321m high, lies 22 miles S of Punta Monumento. This island is high, barren, and mostly steep-to.

Punta Granito (28°59'N., 112°10'W.), located 21 miles SSE of Punta Sargento, is low, sandy, and fringed by shoals which extend up to 0.8 mile seaward on its S side. This point marks the E side of the S entrance to Canal del Infiernillo.

Punta Kino (28°45'N., 111°58'W.), a conspicuous point, is located 17.5 miles SE of Punta Chueca (Punta San Miguel) and backed by a group of hills, up to 406m high.

Bahia Kino, which is mostly shallow, lies between this point and a dark bluff, 53m high, 7.5 miles NNW. Anchorage within this bay can only be taken by small vessels. Isla Pelicano, 165m high, lies at the outer edge of a shoal bank which extends 1 mile seaward from the N side of the bay.

The coast between Punta Kino and Estero de Tastiola, 35 miles SE, is low, sandy, and known locally as San Juan Bautista Flats (Llanuras de San Juan Batista). The Rio de la Poza divides into several branches in the vicinity of this stretch of coast and disappears into the flats during the dry season. During the rainy season, the flats are covered and the overflow of sand is carried out into the gulf, creating extensive shoals.

4.7 Punta Baja (28°28'N., 111°42'W.), which is marked by a light, is a low, sandy point extending 1 mile from the general line of the coast, 22 miles SE of Punta Kino. A sand spit, with depths of less than 5.5m, extends up to about 4 miles SW from the point. This spit is reported (1994) to be extending further to the W and SW. A detached shoal patch, with a depth of 9.1m, lies about 10.5 miles WNW of the outer end of the sand spit and it is reported that less depths than charted probably lie between this patch and the spit.

Anchorage can be taken by vessels with local knowledge in depths up to 11m off the outer end of the shoal ground, which extends about 1 mile seaward from the entrance of Estero de Tastiola.

Cerro Bocana (Morro Colorada), located 5 miles SE of Estero de Tastiola, is a conspicuous and reddish-colored headland, 231m high.

Las Piedras Blancas, a group of three white rocks located about 1.5 miles apart, lies 0.8 mile offshore, between Punta Lesna (28°13'N., 111°24'W.), which is marked by a light, and Punta Blanca, 5.5 miles SE. The largest rock of the group is 18m high and the others are 4m high.

4.8 Punta San Pedro (28°03'N., 111°16'W.), 160m high, is a bold and rocky headland located 22 miles SW of Estero de Tastiola. This headland forms the NW entrance point of Bahia de San Pedro, a small and sheltered bay. Anchorage, sheltered from NW winds, can be taken by vessels with local knowledge in a depth of 9m about midway between the entrance points of this bay.

Isla de San Pedro Nolasco, a barren and steep-to island, lies 8 miles SW of Punta San Pedro. It is 326m high and marked by a light.

Punta San Antonio (27°57'N., 111°07'W.), a low and rocky point, lying 10 miles SW of Punta San Pedro, is backed by hills

of moderate elevation. Las Tetras de Cabra, two remarkable peaks, rise to an elevation of 498m about 0.5 mile E of the point and are excellent landmarks.

Isleta Venado, a steep and rocky islet about 46m high, is the largest and outermost of three islets, known as Los Algodones, which lie within 1.5 miles of the coast about the same distance NW of Punta San Antonio.

Punta Doble (27°55'N., 111°06'W.), located 1.5 miles SE of Punta San Antonio, is the S extremity of a headland, 75 to 100m high, which projects about 1 mile S from the general line of the coast. Isla de Santa Catalina, a rock, is 45m high and lies close to the coast, about 0.2 mile N of this point. Punta San Guillermo, which is marked by a light, is a rocky point that projects from the E side of the headland.

Bahia de San Carlos (27°56'N., 111°04'W.) forms a small, landlocked harbor which is entered 2 miles E of Punta Doble. This harbor, which is a resort area, provides shelter for small vessels with local knowledge. Care should be taken as several islets lie off the entrance and two dangerous wrecks lie in the inner part. There are depths of 6 to 13m in the approaches, but only depths of 1 to 3m in the harbor. A light is shown from the vicinity of the entrance.

4.9 Ensenada San Francisco (27°55'N., 111°01'W.), a large and open bay, is of little importance. Ensenada de Bocochibampo, a small bay, is entered at the E side of Ensenada San Francisco and provides anchorage in depths of 15 to 18m within its entrance. Care should be taken as the depths decrease rapidly toward the head of this bay. Anchorage can also be taken in depths of 7 to 8m about 0.5 mile offshore within the NE corner of the bay.

Cerro de Bocochibampo, with two prominent peaks, is 500m high and rises on the N side of the Ensenada de Bocochibampo.

Between Ensenada de Bocochibampo and Cabo Arco, 3 miles S, the coast is fronted by several above-water rocks and islets which lie up to 0.3 mile offshore.

Cabo Arco (27°52'N., 110°57'W.) is a high and rocky bluff with a hill, 250m high, rising close behind it.

Cabo Haro (27°50'N., 110°53'W.), a prominent rocky and steep-to headland, is located 3.8 miles ESE of Cabo Arco. A hill, joined to the mainland by a narrow isthmus, rises on the W side of this cape and is 111m high. A light is shown from the cape.

Punta Narizon (27°52'N., 110°53'W.), a prominent point, is located 1 mile NNE of Cabo Haro. It is composed of high, rocky bluffs which rise inland to Cerro Narizon, a peak, 274m high. Bahia Catalina, entered 0.5 mile N of the point, is a small and well-protected cove which provides shelter for small craft in depths of 6 to 15m.

Isla San Vicente (27°53'N., 110°52'W.), lying 0.8 mile NE of Bahia Catalina, is separated from the mainland by a narrow, shallow channel. A shoal, with a depth of 6.4m, was reported (1980) to lie about 0.2 mile E of the NE extremity of this islet.

Isla Pitahaya, a high and rocky island, lies 0.3 mile NW of Isla San Vicente.

Caution.—Less water than charted was reported (1985) to lie in the vicinity of Cabo Haro.

Isla de Pajaros (27°53'N., 110°50'W.), a long and rocky island, lies 0.8 mile NE of Isla San Vicente and rises to a height of 90m near its SE side. This island forms the E side of the entrance to Bahia de Guaymas and is connected to the S side of Playa de las Dolores, a long and narrow peninsula, by a shallow bank. Isla Morrito, a small and rocky island, is connected to the W end of the peninsula. A light is shown from a structure standing on the SW extremity of Isla de Pajaros.

Bahia de Guaymas (27°55'N., 110°52'W.), within which lies the port of Guaymas, is entered between Isla San Vicente and Isla de Pajaros.

Guaymas (27°55'N., 110°55'W.)

World Port Index No. 15850

4.10 Guaymas, the largest and most important port within the Gulf of California, consists of an outer, a middle, and an inner harbor. The outer harbor, which provides anchorage, is protected by Isla de Pajaros. The inner harbor lies in the SW part of an extensive inlet, which is entered between Isla Morrito and Punta Baja and extends N for about 5 miles. The E part of this inlet is occupied by a large and shallow area known as La Laguna, which is separated from Estero del Rancho to the N by a railroad embankment. The port facilities are sheltered by the high hills to the N and W and by the islands to the S.

Winds—Weather.—The prevailing winds are from the W in the spring, from the S in the summer, and from the NW during the rest of the year. Violent storms of relatively short duration, known locally as Chubascos, occur during the months of July, August, and September. Storms of similar character occur in October and usually last for several days.

Generally, the prevailing winds and weather found along the E side of the Gulf of California are very similar to those encountered along the W side. Information regarding the currents along this coast is rather meager and somewhat contradictory. The currents probably depend almost entirely upon the winds. The currents setting between Guaymas and Cabo Corrientes are strong and irregular during the rainy season, between May and November. Currents setting N are frequently encountered during this season, but currents setting S normally predominate. Tide rips are often observed along the edges of the shoals that lie off the coast.

Fog is occasionally encountered in the vicinity of the port, but it is usually of a short duration, seldom lasting for more than 8 hours. Mirages are quite common and instances of peculiar refraction have been reported.

Depths—Limitations.—The least depth in the approach to the outer harbor, via the channel leading W of Isla de Pajaros, is 9.1m. However, recent surveys indicate gradual shoaling in some areas. There are depths of 5.5 to 11m in the W part of the outer harbor and 5.5 to 8.8m in the middle harbor. There are depths of 5.4 to 11.8m in the inner harbor between Muelle Sur and Isla Almagre Grande, but depths of less than 5.5m lie in the W part.

The outer harbor is the deepest part of the port and allows vessels with drafts of up to 11m to enter. A shoal, with a depth of 6.4m, was reported (1980) to lie in the entrance to this part



Guaymas

of the harbor, midway between Isla San Vicente and the entrance range line. A channel, dredged to a depth of 10m, leads over the bar.

The middle harbor can be entered, by vessels with drafts up to 8.8m, from the S between Isla Morrito and Punta Baja. Isla Almagre Grande separates the middle harbor from the inner harbor. The inner harbor can be entered by only small craft. Most of the inner harbor is encumbered by shoal patches with depths of less than 3.5m.

There are four deep water wharves in the port. Petroleos Mexicanos wharf is 864m long and has a depth alongside of 10m.

Muelle Sur Wharf provides 350m of berthage with a depth of 11.8m alongside. The E side of this wharf has a length of 325m and an alongside depth of 10m.

Muelle de la Ardilla is situated within the inner harbor. It is 109m long and has a depth of 6.7m alongside.

Additionally, there are approximately 30 berths having lengths of up to 95m and alongside depths of 3 to 5m.

Aspect.—Upon close approach to the port, the cathedral standing in the town, with two yellow steeples, is conspicuous. Numerous towers, several tanks, and a water tower are all prominent. A large grain silo standing next to a tower on Muelle Sur Wharf is reported to be very conspicuous. An outer lighted fairway buoy marks the approach channel. The fairway is marked by buoys and indicated by lighted ranges which may best be seen on the chart.

Pilotage.—Pilotage is compulsory for merchant vessels. Pilots can be contacted by VHF and board about 1 mile S of Isla de Pajaros Light. Pilotage is available at night, but it is generally advised to anchor within the outer harbor until daylight.

Anchorage.—Good anchorage can be taken in a depth of 14.5m, mud, in the vicinity of the outer fairway lighted buoy. Vessels of moderate draft can anchor in depths of 6 to 7m, good holding ground, about 0.5 mile W of Isla Morrito. Small vessels can anchor in depths of 4 to 5m within parts of the inner harbor.

Caution.—The coast between Cabo Haro and Punta Bajo should be given a wide berth.

It has been reported that the color of the buoys, marking the fairway, may be affected by bird droppings and the shapes distorted by sunbathing seals.

It is also reported that deposits of silt accumulate between the mouth of Viejo Yaqui and the entrance to Bahia de Guaymas, 11 miles W. Vessels navigating inshore should approach this part of the coast with caution.

Guaymas to Topolobampo

4.11 The coast between Isla de Pajaros and Cerro Yacicoris, 12 miles E, is composed of a low and sandy beach known as El Cochore.

Cerro Yacicoris (27°50'N., 110°37'W.), a conical hill, is 115m high and stands on the W side of the entrance to Rio Viejo Yaqui, a large and shallow inlet, which is navigable only by boats. Cerro Cochis (Cerro Tordillo), a prominent hill, is 166m high and rises 4 miles WNW of Cerro Yacicoris.

Bacatete (28°00'N., 110°22'W.), a prominent peak, is 1,019m high and stands 16 miles ENE of the mouth of Rio Viejo Yaqui.

Rio Yaqui (27°37'N., 110°37'W.) flows into the sea through three outlets, which from a short distance look like lagoons. A sand bank, which breaks, fronts these outlets and extends up to 2 miles offshore. A light is shown from a tower standing 3 mile S of the entrance to Rio Yaqui.

Baroyeca, a prominent mountain, is 1,005m high and rises 48 miles E of the Rio Yaqui.

Punta Lobos (27°20'N., 110°38'W.), located 17 miles S of the Rio Yaqui, is a low and sandy island, which is separated from the mainland by a lagoon. A light, equipped with a racon, is shown from the point. Monte Verdi, a conspicuous green mound, is 23m high and rises 2 miles from the W end of the island.

Vessels are advised to pass at least 10 miles seaward of this point because of reported extensive shoaling to the W and NW of it. Strong variable currents are often encountered in the vicinity of Isla Lobos and fog is fairly common.

A light is shown from a structure standing 5 miles NE of Punta Lobo, at the mouth of Estero Lobos.

4.12 Estero de Huivuilay (Bahia Tovari) (27°01'N., 109°58'W.) is an extensive lagoon which is fronted by several low and narrow islands extending up to about 15 miles NW and S of it. The channel leading into this shallow lagoon is about 0.5 mile wide, but is available only to small craft with local knowledge.

During fine weather, anchorage can be taken anywhere along the coast between Estero de Huivuilay and Punta Lobos, but vessels should stay about 3 miles offshore and keep in depths of over 11m.

Punta Arboleda (26°47'N., 109°52'W.), marked by a light, is located at the S end of an island which is separated from the mainland by the lagoon. The only trees found in this vicinity stand on the island and are an excellent landmark.

Estero de Sante Lugarda, which is obstructed by a shallow bar, lies 4 miles SE of Punta Arboleda and forms an entrance of the lagoon into which the Rio Mayo discharges. A light is shown from a structure, 13m high, standing near the mouth of this river.

Punta Rosa (26°40'N., 109°41'W.), a low and reddish-colored point, is located 11 miles SE of Punta Arboleda and marked by a light. The intervening coast consists of a low, sandy beach backed by yellowish sand dunes, 15 to 25m high. Good shelter can be taken within Bahía de Santa Barbara which lies close E of Punta Rosa. Anchorage can be obtained in a depth of 13m about 1 mile offshore, but the bay is entirely exposed to SW winds.

Puerto de Yavaros (26°41'N., 109°30'W.) (World Port Index No. 15840), a small harbor, lies within an enclosed bay which is entered between Punta Yavaros and Punta Lobera, the E extremity of Isla Lobera. A light is shown from the N side of this bay. The approach channel is protected by a stone breakwater which extends about 2 miles SSE from a position 0.6 mile WSW of the E extremity of Isla Lobera. The narrow fairway leading E of this breakwater is reported (1964) to have a least depth of 2.4m on the bar. Within the bar, the depths increase and the channel narrows. A berthing facility at Yavaros has sufficient depths alongside and can be used by any vessel able to enter. A small wharf for the use of fishing vessels fronts the town. Pilotage is compulsory. Anchorage can be taken close outside the bar in a depth of 18m, good holding ground.

4.13 Estero de Agiabampo (26°19'N., 109°16'W.), the entrance to an extensive lagoon, lies 27 miles SE of Puerto de Yavaros. The intervening coast is low, sandy, and covered with bushes. Pico de Alamos, a sharp and prominent peak, is 1,791m high and rises 31 miles ENE of Puerto de Yavaros. The entrance is difficult to identify and is obstructed by shoals and sand bars which extend up to 1 mile offshore. A light is shown from the S side of the entrance. The lagoon is accessible only to small craft with local knowledge. Observation Hill, a sand dune surmounted by a wooden cross, stands opposite the S end of the sand bar and serves as an aid when entering. A current, with a rate of 2 to 3 knots, is usually experienced in the vicinity of the bar and local knowledge is required. Anchorage can be taken in a depth of 12m about 1.8 miles offshore and W of Observation Hill.

Punta Ahome (25°56'N., 109°27'W.), the N entrance point of the Rio Fuerte, is located 25 miles SSW of Estero de Ahome. It is a low, sandy point which projects 1 mile from the general line of the coast. The river can only be used by small craft with local knowledge. Cerro del Cocodrilo, a prominent flat-topped hill, is 126m high and stands 6 miles NE of the point. Sierra de San Pablo, 617m high, rises 19 miles E of the point.

Punta San Ignacio (25°36'N., 109°23'W.), a low point, is located at the S end of a small, sandy island lying 19 miles S of Punta Ahome. The intervening coast is fronted by Isla de las Piedras and Isla de la Lechuguilla, which are both backed by an extensive lagoon with low, marshy land extending along its E side.

A dangerous breaking shoal extends up to 3 miles offshore in the vicinity of Punta San Ignacio. Vessels should give this area a wide berth as the shoal has been reported to have extended farther SE.

Isla de Santa Maria, a low island, lies close E of Punta San Ignacio. Its shore consists of a steep beach backed by a range of sand dunes, 15 to 30m high. Good anchorage, protected from NW winds, can be taken in depths of 11 to 13m within Bahía de San Ignacio, which indents the S coast of the island.

4.14 Farallon de San Ignacio (25°27'N., 109°24'W.), 142m high, lies 10 miles S of Punta San Ignacio. This island is barren, white-colored, and marked by a light. A few detached rocks lie close off the N side, but elsewhere the island is steep-to.

Bahía de Topolobampo (25°33'N., 109°09'W.), an extensive inlet, is entered between Punta Santa Maria, located on the E end of Isla de Santa Maria, and Punta Copas, 2.5 miles E. The town of Topolobampo stands along its N shore.

It was reported (1994) that Punta Santa Maria shows only at LW and that Punta Copas is receding to the SE.

Cerro Partido, 78m high, lies 2 miles ESE of Punta Copas and is marked by a light. A prominent bald-faced cliff stands close S of the summit of this hill. Monte San Carlos, 249m high, rises 4 miles NE of Cerro Partido and is the tallest peak on the S side of the bay. Cerro Babiri Chico, 76m high and round, stands on the N side of the bay, 2.3 miles NNE of Punta Copas. A white church, with an illuminated cross, stands on its summit. Joroba del Camello, 273m high, is the tallest peak on the N side of the bay. Three conspicuous oil tanks are situated in the town.

The greater part of the bay is obstructed by shallow flats. Several narrow, winding channels lead through these flats to the town, 6 miles above the entrance. Above the town, the bay opens out into Bahía de Ohuira (Bahía San Carlos), an extensive and shallow lagoon of no commercial importance.

Topolobampo (25°36'N., 109°04'W.)

World Port Index No. 15830

4.15 Topolobampo lies on the coast of the Gulf of California, at the confluence of the Ohuira Bay and the Topolobampo Bay. The port serves the city of Los Mochis which stands 12 miles inland. There are facilities for general cargo, container, bulk, oil, and ferry vessels.

Winds—Weather.—During March and April, NW winds prevail and raise a breaking sea over the bar. The climate is predominantly dry and warm with a mean annual temperature of 22°C. The rainy season usually begins at the end of June and is said to be variable in duration.

Tides—Currents.—Tides rise about 1.5m at springs and 0.9m at neaps.

Strong E currents have been experienced in the vicinity of Bahía de Topolobampo and should be allowed for when making the approach. Strong currents also set across the bar and through the entrance channels.

Depths—Limitations.—An outer fairway lighted buoy is moored 3 miles S of Punta Santa Maria and marks the entrance to the buoyed channel leading over the bar. The entrance channel leads 2 miles N from the fairway buoy and then turns NE for 1.8 miles to a position lying 0.5 mile E of Punta Santa Maria. Within the bar, the depths increase gradually and range



Topolobampo

from 18 to 31m in places. The fairway channel varies between 0.3 and 0.5 mile in width and was reported (1997) to have a least depth of 12.5m.

The general cargo and bulk quay is 100m long and has a depth of alongside of 9m. The container quay is 240m long and has a depth of 12m alongside. Vessels of up to 55,000 dwt, 240m in length, and 11m draft can be accommodated.

A tanker jetty is situated at Punta Mapan, E of the town. It is 250m long and has a depth of 14m alongside the berth on the S side. Departure from this jetty is dependent on the state of the tide and is done during daylight hours only.

Aspect.—A light is shown from a point on the S side of the bay, 4.5 miles SSW of Topolobampo. Three conspicuous oil tanks are situated in the town and a prominent white church stands close SW of them. The entrance fairway is indicated by lighted ranges.

Pilotage.—Pilotage is compulsory and is available 24 hours. The pilot boards in the vicinity of the Fairway Lighted Buoy. Vessels approaching the port are advised not to proceed N of 25°30'N without the aid of a pilot.

Anchorage.—Outer anchorage may be obtained about 1 mile SW of the Fairway Lighted Buoy. Inner anchorage may be obtained in depths of about 15 m, mud, SW of Punta Pinto (25°34'N., 109°04'W.), although ships may pass close by and swinging room is limited.

Topolobampo to Mazatlan

4.16 Isla de San Ignacio (25°25'N., 108°55'W.), low and sandy, is the W most of the series of islands that front the coast between Topolobampo and the Rio Sinaloa, 40 miles ESE. The W end of this island lies 8.5 miles SE of Punta Copas and an extensive breaking shoal extends 2.5 miles W from it.

The peaks of Sierra de Navachista, up to 457m high, rise behind the lagoon which separates the island from the mainland. Isla Macapule, a large island lying close E, is separated from Isla de San Ignacio by a narrow, shoal passage leading into the lagoon. A light is shown from the W end of this island. Isla de Vinorama, a small and sandy islet, lies on the E side of the passage. Vessels should not attempt to use this passage without local knowledge.

The Rio Sinaloa, a river of no commercial importance, discharges into the sea through the passage, E of Isla

Macapule. The discolored water discharged from this river can be seen for some distance offshore.

4.17 Estero de Playa Colorada (25°11'N., 108°23'W.), a shallow passage, lies 24 miles ESE of the E end of Isla de San Ignacio and leads into Estero Altamura, the next lagoon to the SE. It is fronted by shoals extending up to 3 miles offshore on which the sea constantly breaks. A light is shown from a structure standing on Punta Colorada and Yameto Light is shown from a structure standing on Bajos de Santa Maria, SE of the point. The depth on the bar, which fronts the passage, is subject to change and entry should not be attempted without local knowledge. Pilots are usually available at Mazatlan. Anchorage can be taken in depths of 9 to 11m about 4 to 5 miles offshore, seaward of the bar.

Between Estero de Playa Colorada and Punta Colorada, 28.5 miles SSE, the coast is fronted by Isla Saliaca and Isla de Altamura, both low and sandy. Punta Colorada, the S extremity of the latter island, is a steep, rocky point. The passage leading into the S end of the lagoon lies between this point and Isla Baredito, to the SE. Entry should not be attempted without local knowledge. A shoal, on which the sea breaks heavily, extends across this entrance. A stranded wreck is reported to lie close off Punta Colorada. A light is shown from a structure standing near the N end of Isla Saliaca.

Pico Aguapepa, the W most of three prominent peaks, is 457m high and rises 22 miles NE of the N end of Isla Baredito. When bearing NE, this peak forms a good mark for identifying the entrance.

Isla Baredito, formerly separated from the mainland by a lagoon, is low and sandy. A breaking shoal extends about 4 miles SW from the S end of this island.

Isla Lucenilla, the next island to the SE, is low, sandy, and forms the seaward side of Bahia de Altata. The bay formerly served as the port for Culiacan, the capital of the State of Sinaloa, which is situated 32 miles inland. The entrance channel, which crosses a bar at the S end of Isla Lucenilla, is subject to frequent change and should not be attempted without local knowledge. The village of Altata stands at the N end of the bay and has no facilities for working cargo. A light is shown from the village.

A shoal of considerable extent, with a least known depth of 10m, lies about 12 miles SW of Altata.

Ensenada de Pabellon, the SE extension of Bahia de Altata, is fronted on its seaward side by Peninsula de Lucenilla. This latter body of water has no commercial significance.

The coast between the bar at the S end of Isla Lucenilla and Boca Tavalá, 27 miles SE, consists of low, sandy beaches with no off-lying dangers.

4.18 Boca Tavalá (24°15'N., 107°28'W.) is the outlet of the Rio San Lorenzo. It is also the entrance to a large lagoon, which runs SE for over 30 miles and is enclosed by a narrow strip of land. Sierra de San Sebastian, a high range of mountains, rises inland of the lagoon, 15 to 25 miles from the coast. Pico Chuchamone, 1,507m high, forms the summit of this conspicuous range. A prominent chimney stands 2 miles NW of Boca Tavalá and El Dorado Light is shown from a tower standing close E of it.

Rio Elota (23°52'N., 106°58'W.), which becomes a torrent during the rainy season, lies 6 miles NW of Punta San Miguel. The mouth of the river dries during the dry season.

Punta San Miguel (23°48'N., 106°54'W.) is a rocky point fronted by several rocks. Cerro de la Vigas, a prominent and triangular hill, is 280m high and rises 2.5 miles ESE of the point. A rocky bluff is located 4 miles SE of the point and a prominent mound, 38m high, rises close behind it.

Rio Piaxtla, a small stream, flows into the sea about 7.5 miles SE of Punta San Miguel and 3 miles N of Punta Piaxtla. Punta Piaxtla, marked by a light, is 48m high and the S most of two rocky headlands lying about 1 mile apart. Anchorage can be taken in depths of 9 to 11m, about 1 mile offshore, within the bay indenting the coast between the N most rocky headland and the mouth of the river.

Between Punta Piaxtla and the entrance to Mazatlan, 35.5 miles SE, the coast is mostly low, sandy, and free from off-lying dangers. Several prominent islands and rocks lie close offshore within 5.5 miles NW of Mazatlan and serve as good landmarks. **Isla Pajaros** (23°15'N., 106°30'W.), the NW most island of the group, lies about 0.5 mile offshore. It is rocky, barren, and 122m high. Uneven and foul ground fronts the NW end of the island. A shoal patch lying about 1 mile N of the N end of the island was reported to break, but it was estimated to have a depth of not less than 9m as a heavy swell was running at the time. Good anchorage can be taken in a depth of 11m close NW of the island, but local knowledge is required.

Isla Venados, with Isla Lobos lying close S of it, lies 1 mile SSE of Isla Pajaros. It is barren, rocky, and connected to the mainland by a shoal bank. Bush Peak, the summit of Isla Venados, is 152m high and Cliff Peak, the summit of Isla Lobos, is 91m high.

The coast between Punta Codo, located on the mainland abreast Isla Venados, and Punta Tiburon, 2.5 miles SE, is fronted by an almost continuous sandy beach backed by lagoons. Inland, the terrain is low, flat, and treeless. The S part of this section of coast forms Bahía de Puerto Viejo.

Between Punta Tiburon and Isla Creston, 2 miles S, the coast is backed by high, rugged hills which stand on the W side of a broad peninsula.

4.19 Isla Creston (23°11'N., 106°26'W.), which forms the W side of the outer harbor, is 152m high, marked by a light, and is connected to the peninsula by a causeway. A racon is situated at the light structure.

Hermano del Sur and Hermano del Norte, each 46m high, are the most prominent of a group of islets lying 0.8 mile NW of Isla Creston. Roca Tortuga, the outermost danger in this vicinity, is 1.5m high and steep-to.

Piedra Negra, the outermost island in the approach, lies 0.8 mile S of the E breakwater head. It is 2m high, steep-to, and marked by a light. Roca Anegada, a dangerous pinnacle rock, lies about 0.5 mile N of this island.

Isla Chivos (23°11'N., 106°25'W.), a partly wooded and prominent islet, is 68m high and lies on the E side of the entrance channel, 0.5 mile E of Isla Creston.

Mazatlan (23°12'N., 106°25'W.)

World Port Index No. 15810

4.20 Mazatlan, the most important harbor on the Pacific coast between San Diego and Panama, is entered between two short breakwaters, which extend seaward from Isla Creston and Isla Chivos. The port, a large tourist resort, also serves as the largest fishing port on the Pacific coast of Mexico. The harbor area, lying 1 mile above the entrance, has been extensively reclaimed to provide ample alongside berthing facilities and depths for ocean-going vessels. The channel divides to the N of the harbor, forming two shallow estuaries of no commercial importance.

Winds—Weather.—During January to April, the presence of fog is common at the harbor entrance between 0600 and 1000. During July and August, the port is subject to violent squalls from off the land. These squalls are frequently accompanied by thunder and lightning.

Winds known as Chubascos are especially prevalent in May, sometimes reoccurring for several days. Dark clouds form on the mountains soon after midday and at about 1600, the wind from the SW suddenly veers to the ENE. This wind from the ENE often lasts until about 2000 and reaches force 8, sometime force 10. These storm winds become less frequent toward the end of May, but sometimes occur again at the change of the season in October.

It is very hot during the rainy season, from June to September, but the heat is lowered by frequent showers and a cooling wind at night. During October, the operating of small boats and berthing of vessels may be difficult due to the swell in the harbor.

Tides—Currents.—The current sets W at the entrance, but the tidal effects predominate inside the harbor.

The tides rise about 1.1m at springs and 0.8m at neaps. It is reported that the current in the entrance channel sets S during the ebb and N during the flood. Vessels are recommended to enter the harbor at slack water if intending to use the turning basin. Tidal currents can reach a rate of 2 knots.

Depths—Limitations.—The controlling depth in the entrance channel is 9.1m. A turning basin, lying 1.3 miles within the entrance, has a least depth of 8.5m.

An oil berth, with a depth of 10m alongside, is situated on the W side of the harbor, 0.5 mile inside the entrance. Tankers of up to 180m length and 9.1m draft can be accommodated.

A passenger berth, 140m long, lies close S of the oil berth. It has depths of 7 to 10m and is used by cruise liners.

Commercial Wharf, situated NE of the oil berth, provides 1,332m of berthage with depths of 9 to 10m alongside. It has facilities for ro-ro and container vessels. Generally, cargo vessels of up to 190m in length and passenger liners of up to 240m in length can be handled alongside with drafts of up to 9m.

A Naval Wharf, 131m long, with a depth of 4.5m alongside is situated at the head of the harbor, 2 miles from the entrance. A fishing vessel pier lies NE of the Naval Wharf and provides 1,400m of berthage with depths of 4.2 to 5.2m alongside.

Aspect.—Prominent radio towers stand 0.8 mile NNE and 1.5 miles N of Isla Creston Light. A brewery, with a



Mazatlan

conspicuous tower, stands on the E side of the town, 1.5 miles NNE of the entrance.

Monte Silla, a conspicuous saddle-shaped hill, forms the summit of Isla Piedra. It is 72m high and rises 0.8 mile NNE of Isla Chivos.

The approach channel and entrance fairway are marked by buoys and indicated by lighted ranges. However, the range structures are reported to be difficult to identify at a distance, especially during the morning haze.

Pilotage.—Pilotage is compulsory and is available 0800-1700. However, special arrangements can be made for night pilotage if required. Vessels should send an ETA 24 hours in advance through their agent. Pilots can be contacted by VHF and usually board about 0.5 mile SSE of Isla Creston Light.

Anchorage.—Anchorage can be obtained in a designated area, which may best be seen on the chart.

Mazatlan to Puerto de San Blas

4.21 The coast between Mazatlan and the Rio del Baluarte, 22 miles SE, is generally low and sandy with a growth of bushes and small trees. The Rio Presidio, lying 10 miles SE of Mazatlan, is navigable only by small boats during the dry season. A narrow lagoon parallels the coast between the entrance to this river and the Rio del Baluarte. It is backed, 8 miles inland, by a range of mountains. Cabeza de Caballo, a conspicuous peak, is 603m high and rises near the middle of this range. Pico del Metate, the N most peak of the range, is 914m high. It rises 15 miles NNE of the mouth of the Rio Presidio and is very conspicuous from seaward.

Rio del Baluarte (22°48'N., 106°02'W.), like the Rio Presidio, is also navigable only by small boats during the dry season. A light is shown from a structure standing near the mouth of the river. Anchorage can be taken in depths of 11 to 13m of the mouth of the Rio del Baluarte, about 2 miles offshore.

Boca Teacapan (22°30'N., 105°45'W.), lying 22.5 miles SE of the Rio del Baluarte, is the outlet of two extensive lagoons. The mouth is marked by a light. A continuously breaking bar

fronts the entrance and extends up to about 2 miles offshore. The lagoons are accessible only by small craft. Anchorage can be taken off the entrance, about 0.8 mile seaward of the outer edge of the bar.

A low and slightly projecting point extends from the coast 28 miles S of Boca Teacapan. A lagoon lies parallel along most of this stretch of coast. A light is shown from a structure standing about 3 miles N of this low point. Barra Mexcaltitan lies 18 miles S of the point. The countryside, for many miles inland, is low and level. Several hills, 275 to 490m high, rise 15 to 20 miles inland from the coast.

4.22 Barra Mexcaltitan (Estero Camichin) (21°47'N., 105°31'W.), the S most outlet of a lagoon, can be identified by a small settlement situated on its W bank, just above the entrance. Anchorage can be taken in depths of 9 to 11m about 1 mile off this outlet or in a depth of 11m about 0.5 mile off Estero del Asadero, 7.5 miles SSE. A small shoal fronts the latter entrance.

Isla Isabel (21°53'N., 105°54'W.) lies 17 miles offshore, 22 miles WNW of Barra Mexcaltitan. This island is 85m high and two prominent white pinnacle rocks stand near its N end.

Rio Grande de Santiago (21°41'N., 105°27'W.) is fronted by a dangerous breaking shoal which extends up to 4 miles seaward. This river discharges into the sea, about 4.5 miles S of Barra Asadero. Piedra Blanca del Mar, a steep-to white rock, lies 5.3 miles WSW of the mouth of the river and is 44m high. This rock serves as a good landmark when approaching from the N or W.

4.23 Islas Tres Marias (21°33'N., 106°30'W.), a group of four islands of volcanic origin, lies within 40 miles SW of Isla Isabel. The W sides of the islands are high and barren, whereas the E sides are generally low and sandy with some vegetation. Isla Maria Cleofas, the S most island, is 402m high and surrounded by several detached rocks. A breaking reef extends 2.5 miles E and then 2 miles S from the NE extremity of this island. A yellowish bluff, surmounted by a steep hill, forms the SE extremity of the island. A well-protected lagoon, with a depth of 8.2m in the entrance, lies at the E side of the island. A light is shown from a structure standing on the SE side of the island.

Anchorage, protected from N and NE winds, can be obtained in a depth of 22m off the SE end of the island.

Isla Maria Magdalena, the next island to the NW, is separated from Isla Maria Cleofas by a channel, which is 8.5 miles wide and free from dangers. This island is 457m high and has considerable vegetation. A constantly breaking reef, with shallow depths, extends 3 miles SE from a high, yellow-colored bluff, which forms the E extremity of the island. The island is fronted by several above-water rocks which lie up to 0.5 mile seaward in places.

Isla Maria Madre, the largest island of the group, is separated from Isla Maria Magdalena by a channel, 4 miles wide, but breakers were reported to extend across its E part. The summit of the island is 616m high and rises in the central part, but a peak standing close SW of it is the most prominent.

A dangerous reef extends about 1 mile N from the NW extremity of the island and a detached rock lies 0.3 mile offshore, 2 miles S of the NW extremity of the island.

A penal settlement is situated about midway along the E side of the island and is fronted by a small mole.

Isla San Juanito, the smallest and N most island of the group, is separated from Isla Maria Madre by a channel, which is encumbered by numerous dangers. A prominent white rock, 45m high, lies 1 mile seaward of the SW side of the island. A light is shown from a structure standing on Punta Roca Colorada, the N extremity of the island.

Caution.—The Islas Tres Marias group serves as a prison colony and vessels are advised to keep well clear of the islands in order to avoid interception and detention by Mexican authorities.

4.24 Puerto de San Blas (21°32'N., 105°19'W.) (World Port Index No. 15800) lies along the E bank of a creek which is fronted at its entrance by a drying bar. There are depths of 3.6 to 5.5m over a small area within the bar, but elsewhere the harbor is shallow. Vessels anchor in the roadstead and work cargo from lighters.

The approach channel is indicated by a lighted range. Vigia Hill, 32m high, stands on the S side of the narrow peninsula, which forms the S and W sides of the creek. Castillo de la Entrada, a fort in ruins, stands on the SW side of this peninsula. Foul ground fronts the W side of the peninsula and extends up to 0.3 mile offshore.

A light is shown from a structure standing close W of Castillo de la Entrada.

Piedra Blanca de Tierra, a white rock, lies 1 mile SW of Castillo de la Entrada and is 16m high. It is flanked by two detached rocks, one to the NE and one to the SW. Good anchorage can be taken in the roadstead in depths of 10 to 11m about 0.5 mile SSE or in a depth of 8m about 0.5 mile E of this white rock. The anchorage is safe during the dry season and less dangerous than Mazatlan during the rainy season. However, it is advisable to avoid remaining here during the hurricane season, known locally as Cordonazos, which lasts from June to November.

A strong S set is usually experienced along the coast in this vicinity during the greater part of the year.

Puerto de San Blas to Cabo Corrientes

4.25 Punta Camaron (21°30'N., 105°17'W.) is a sharp and bluff point with a ridge of hills terminating close behind it. Several small islets and rocks lie close W of this point. The coast to the S of the point is mountainous, contrasting markedly with the low and sandy plains extending along the coast to the N.

Ensenada de Matenchén (21°30'N., 105°15'W.) is entered between Punta Camaron and Punta Santa Cruz, 5.5 miles SSE. This small, open bay is fringed by a shoal, which extends up to about 0.5 mile offshore in places, and provides excellent anchorage for small craft. Punta Santa Cruz, the S entrance point, consists of high, reddish-colored bluffs and is very prominent.

Cerro San Juan (21°27'N., 105°00'W.), 2,301m high, rises 14 miles E of Punta Santa Cruz. This mountain is seldom obscured and resembles a saddle when viewed from the W.

Punta Los Custodios (21°21'N., 105°16'W.), 9m high, is located 5 miles SSW of Punta Santa Cruz. A river lies close S of this rocky bluff and a rock, 9m high, lies about 3 miles W of it.

Punta Raza, a reddish-colored bluff, is 9m high, marked by a light, and located 18.5 miles S of Punta Los Custodios. The coast between is steep-to with no distinguishing features.

Cerro Compostela, a prominent peak, is 1,300m high and rises 13 miles ENE of Punta Raza.

The coast between Punta Raza and Punta de Mita, 21.5 miles SW, is steep-to and consists of a series of bluffs rising inland to a high range of mountains. Cerro Vallejo, the most prominent peak of this range, is 1,535m high and rises 9 miles SE of Punta Raza.

Punta de Mita (20°46'N., 105°33'W.), marked by a light, is formed by a low, narrow neck of land, which is surrounded by foul ground extending up to 0.5 mile offshore. A dangerous breaking shoal, with a rock awash on it, lies about 1 mile SSW of the point. The passage lying between the point and this shoal has depths of 5 to 7m. A prominent hill, 138m high, rises 1.5 miles NE of the point.

Good anchorage can be taken in depths of 9 to 13m about 1.5 miles E of the point, between 0.5 and 0.7 mile offshore.

A dangerous rock, with a depth of 1m, was reported (1978) to lie about 2.5 miles SSW of Punta de Mita.

4.26 Las Tres Marietas (20°41'N., 105°36'W.) is a group of islets, rocks, and shoals, about 5 miles long, lying with its E extremity located 4.2 miles SSW of Punta de Mita. The E most and largest islet of this group rises in a series of broken, white cliffs to a flat-topped summit, 55m high. A steep-to rock, 4m high, forms the W most danger of this group. A light is shown from a structure standing on Isla Marieta, which lies 1 mile W of the E most islet.

Caution.—An underwater rock was reported (1978) to lie in the channel leading between Punta de Mita and Las Tres Marietas.

Roca Corbetena (20°44'N., 105°51'W.), a steep-to and white-colored rock with a jagged top, lies 17 miles W of Punta de Mita and a rock, awash, lies 0.5 mile W of it. Strong variable currents have been observed in the vicinity of these rocks.

Bahia de Banderas (20°39'N., 105°30'W.) is entered between Punta de Mita, on the N side, and Cabo Corrientes, 23 miles SSW. Puerto Vallarta lies at the E end of this large and deep bay.

Punta Montoga (20°44'N., 105°25'W.), located 7.5 miles E of Punta de Mita, is surmounted by a hill, 99m high. The coast extending between this point and the mouth of Estero de Tomates, 7.5 miles SSE, is low and sandy. During NW winds, excellent anchorage can be taken in the bay lying E of the point.

Estero de Tomates (20°40'N., 105°18'W.), into which the Rio Ameca discharges, is fronted by a bar, which breaks and has depths of less than 1m. A roadstead anchorage, where vessels can work cargo from lighters, lies about 0.5 mile SE of the mouth of the estuary. It has a depth of 15m and is marked by a white drum buoy.

Rio Real (Rio Cuale) flows into the head of the bay, 4.5 miles SSE of Estero de Tomates. Puerto Vallarta lies along the N bank of this river near its mouth.

4.27 Puerto Vallarta (Las Penas) (20°39'N., 105°15'W.) (World Port Index No. 15790) is a well-known tourist resort with many luxury hotels. The main harbor facilities are situated 2.5 miles N of the town.

Winds—Weather.—Generally, winds from the NE predominate. They tend to be calm in mornings and pick up in strength in the late afternoon.

Depths—Limitations.—The entrance and harbor basin have been dredged to depths of 12 to 14m. The Municipal Pier, 100m long, lies at the N side of the basin and a ro-ro terminal is situated at the E side. There are also two passenger berths, each 200m long. Vessels of up to 81,000 dwt, 232m in length, and 10m draft can be accommodated.

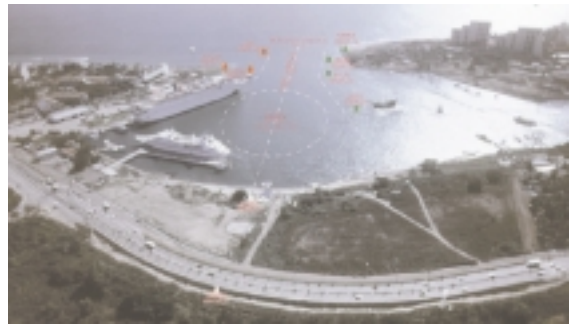
Aspect.—A high, white hotel, a prominent radio mast, and a conspicuous church, with a spire and golden dome, are situated in the town. The hills rise abruptly to a height of 305m close E of the town and are prominent. A hotel, with a prominent green lighted sign, stands 0.8 mile SE of the E side of the harbor. The entrance to the inner harbor is marked by lights. The approach channel is indicated by lighted ranges which may best be seen on the chart.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and board about 2 miles SW of the harbor entrance.

Anchorage.—During good weather, anchorage can be obtained in a depth of 18m about 0.2 mile NW of the harbor entrance. Large cruise liners often anchor about 0.6 mile WSW of the harbor with the W entrance light structure in range with a small white house.

Caution.—The inner harbor is usually congested with large cruise liners and yachts, and maneuvering can be difficult.

Charted depths in the outer anchorage areas may be inaccurate due to the constant shifting of the sea bed in this vicinity.



Entrance to Puerto Vallarta

An outfall pipeline, the seaward part of which is marked by a buoy, extends 3.3 miles SSW from the vicinity of the harbor entrance.

The range structures are reported to be low and difficult to identify during daylight. They may also be obscured at times by yachts and small craft.

4.28 Los Arcos (20°33'N., 105°19'W.), consisting of three rocks, lies close offshore, SW of the Rio Cuarte. The largest rock is 89m high.

Tecomates (Yelapa), a small coastal village, stands 8.3 miles W of these rocks and is marked by a light. Small vessels, with local knowledge, can obtain anchorage, sheltered from all winds except those from between NW and NE, in a depth of 27m off this village.

Punta Chimo (20°28'N., 105°38'W.), a rocky headland, is located 9 miles W of Tecomates and a shoal patch, with a depth of 5.4m, lies about 1.5 miles NE of it. La Iglesia, a white rock, is 12m high and lies close SW of the headland.

The coast between Punta Chimo and Cabo Corrientes, 7 miles SW, is indented by two small, deep bays of no commercial importance.

Cabo Corrientes (20°24'N., 105°43'W.), marked by a main light, is located 6.5 miles S of Bahia de Banderas.